TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

410 Rec'd PCT/PTO 0 1 OCT 2001

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR
09/937874

INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/DE00/00980	**31 March 2000**	**31 March 1999**

TITLE OF INVENTION

METHOD FOR TRANSMITTING DATA BETWEEN MEMBERS OF AN OPERATOR SERVICE

APPLICANT(S) FOR DO/EO/US

Wahid Adli

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.

2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.

3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).

4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.

5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))

    a. ☒ is transmitted herewith (required only if not transmitted by the International Bureau).

    b. ☐ has been transmitted by the International Bureau.

    c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).

6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).

7. ☒ A copy of the International Search Report (PCT/ISA/210).

8. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))

    a. ☒ are transmitted herewith (required only if not transmitted by the International Bureau).

    b. ☐ have been transmitted by the International Bureau.

    c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.

    d. ☐ have not been made and will not be made.

9. ☒ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).

10. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).

11. ☒ A copy of the International Preliminary Examination Report (PCT/IPEA/409).

12. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).

Items 13 to 20 below concern document(s) or information included:

13. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.

14. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.

15. ☒ A **FIRST** preliminary amendment.

16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.

17. ☒ A substitute specification.

18. ☐ A change of power of attorney and/or address letter.

19. ☒ Certificate of Mailing by Express Mail

20. ☒ Other items or information:

Submission of Drawings Figure 1 on one sheet

21.　　The following fees are submitted:.

BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :

CALCULATIONS　PTO USE ONLY

41C Rec'd PCT/PTO　0 1 OCT 2001

- ☐ Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2) paid to USPTO and International Search Report not prepared by the EPO or JPO **$1,000.00**
- ☒ International preliminary examination fee (37 CFR 1.482) not paid to USPTO but Internation Search Report prepared by the EPO or JPO . . . .
- ☐ International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO **$710.00**
- ☐ International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) **$690.00**
- ☐ International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) **$100.00**

ENTER APPROPRIATE BASIC FEE AMOUNT =　　**$890.00**

Surcharge of **$130.00** for furnishing the oath or declaration later than ☐ 20　☐ 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).　　**$0.00**

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	9　- 20 =	0	x　$18.00	$0.00
Independent claims	2　- 3 =	0	x　$80.00	$0.00
Multiple Dependent Claims **(check if applicable)**.			☐	$0.00

TOTAL OF ABOVE CALCULATIONS　=　　**$890.00**

Reduction of 1/2 for filing by small entity, if applicable. Verified Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28) **(check if applicable)**.　☐　**$0.00**

SUBTOTAL　=　　**$890.00**

Processing fee of **$130.00** for furnishing the English translation later than ☐ 20　☐ 30 months from the earliest claimed priority date (37 CFR 1.492 (f)).　+　**$0.00**

TOTAL NATIONAL FEE　=　　**$890.00**

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) **(check if applicable)**.　☐　**$0.00**

TOTAL FEES ENCLOSED　=　　**$890.00**

Amount to be: refunded	$
charged	$

☒　A check in the amount of **$890.00**　　to cover the above fees is enclosed.

☐　Please charge my Deposit Account No.　　in the amount of　　to cover the above fees.
　　A duplicate copy of this sheet is enclosed.

☒　The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No.　**02-1818**　A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

William E.. Vaughan (Reg. No. 39,056)
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Chicago, Illinois 60690

SIGNATURE

William E. Vaughan
NAME

39,056
REGISTRATION NUMBER

October 1, 2001
DATE

BOX PCT

IN THE UNITED STATES ELECTED/DESIGNATED OFFICE

OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER THE PATENT COOPERATION TREATY-CHAPTER II

5 **PRELIMINARY AMENDMENT**

APPLICANT:	Wahid Adli	DOCKET NO: 112740-336
SERIAL NO:		GROUP ART UNIT:
		EXAMINER:
INTERNATIONAL APPLICATION NO:		PCT/DE00/00980
10 INTERNATIONAL FILING DATE:		31 March 2000

INVENTION: METHOD FOR TRANSMITTING DATA BETWEEN

MEMBERS OF AN OPERATOR SERVICE

Assistant Commissioner for Patents,

Washington, D.C. 20231

15 Sir:

Please amend the above-identified International Application before entry

into the National stage before the U.S. Patent and Trademark Office under 35

U.S.C. §371 as follows:

In the Specification:

20 Please replace the Specification of the present application, including the

Abstract, with the following Substitute Specification:

SPECIFICATION

TITLE OF THE INVENTION

METHOD FOR TRANSMITTING DATA BETWEEN

25 MEMBERS OF AN OPERATOR SERVICE

BACKGROUND OF THE INVENTION

The present invention relates to a method for transmitting data between

subscribers of a telecommunications network, who are members of an operator

service, at least a call channel and a data channel being available for connections

30 via a switching center.

Equally, the present invention relates to a telecommunications network in which subscribers who are members of an operator service are connected to a switching center, and the switching center has at least a coordination processor and also peripheral line groups with a group processor.

5   So-called operator services are required in telephone networks and constitute an essential link between the customers of the network and the network operators. The tasks of such an operator service are manifold, a main task being to provide the subscribers with information on enquiry. By way of example, a subscriber may call an operator service in an ISDN network and request

10   information. The competent operator may then, if necessary, access a database, for example, the operator then having an item of information with regard to another subscriber on the screen of his PC. After a connection desire expressed by the operator, which may be effected, for example, by pressing a key, the operator is connected to the subscriber sought. The operator is then connected both to the

15   originating subscriber and to the subscriber sought and can optionally speak to one of the subscribers. Once again in response to further pressing of a key, signaling is effected on the D channel, and the line positions of both subscribers of the peripheral line group are then disclosed, and the voice channels are connected via the switching network, so that ultimately there is a direct connection between the

20   two subscribers. The example just described is intended to represent only one of the possibilities or tasks of an operator service.

Large networks with many subscribers require correspondingly large operator service systems with many, usually hierarchically structured system subscribers (operators), such as, for example, in the applicant's system called

25   ADMOSS. Messages from the operators to a switching center are effected, as already mentioned, in the D channel in an ISDN network, to be precise in a point-to-point configuration in the case of a permanently active layer 2 of the OSI layer model. The messages are effected in a manner supported by the D-channel protocol in an ISDN network, in respect of which reference is also made to the

30   Blue Book, Volume VI - Fascicle VI. 11, "Digital Subscribe Signalling System

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No. 1 (DSS1), Network Layer, User-Network Management", Recommendations Q. 930 - Q. 940, in particular to Recommendation Q. 931.

The operators are usually stationed in so-called call centers and their respective equipment, which includes terminal, PC, screen, etc., and usually and

5   hereinafter is called "console", is directly connected to the system or can be connected to the local switching center. During operation of the operator service, there is often a requirement to transmit data from one operator to another. By way of example, one operator who cannot handle an enquiry, for instance for linguistic reasons, should be able to be connected to another operator and communicate to

10   him/her the respective screen content, or parts thereof, of his/her console ("screen transfer"). In order to make this possible, according to the prior art a call connection, in a B channel in the case of ISDN, must be established via which the data transfer is then carried out.

It is an object of the present invention to specify a method which enables a

15   simple transmission of data between operators of an operator service without a dedicated call channel having to be established.

SUMMARY OF THE INVENTION

Such object is achieved via a method of the type mentioned in the introduction in which, according to the present invention, a first, calling operator

20   sends to its peripheral line group of the switching center a request together with the identification of a second, called operator and at least a first data record via a data channel, the identification is forwarded to the group processor of the line group and the group processor sends a message to the coordination processor with the request for disclosure of position information with regard to the called operator, in a list of

25   the coordination processor, position information assigned to the called subscriber is determined and sent to the group processor of the calling operator, the group processor of the calling operator establishes a data connection via a data interface, and the first data record is sent via a data channel to the called operator, and the group processor in the line group of the called operator establishes the connection

30   in the data channel up to the calling operator.

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The present invention makes it possible, with a low outlay and extremely quickly, to exchange data as required between the operators of an operator service, which leads to increased efficiency of the service system and ultimately increases the user friendliness. At the same time, however, no call channel is blocked; i.e., a

5   call channel remains free for calls conducted alongside.

It is expedient if the position information contains the indication of the concentrator, of the port and of the line group.

Furthermore, it may be advantageous if the data traffic between peripheral line groups proceeds via report interfaces. The concept "report interface" is known

10   to the person skilled in the art and is described, for example, in EWSD: line groups LTG subsystem description A 30308-X2720-X-4-18, published by the Public Switching Systems Division, Siemens AG, 1985. It enables very fast data traffic that can be established in a simple manner.

The operators' work is facilitated if the data to be transmitted contain at

15   least parts of a screen content and/or of a spoken enquiry.

The method of the present invention is particularly expedient if the communications network (NET) is an ISDN network, the data channel is the D channel and the call channels are B channels.

The object set is also enabled by a telecommunications network of the type

20   mentioned above in which, according to the present invention, a list is set up in the coordination processor, which list determines, in addition to the identification of the operators, the position information thereof, such as line group, port number and concentrator, and the switching center is set up for receiving a request of a calling operator, which contains an identification of a called subscriber and at least a first

25   data record for sending, on the basis of the identification, using the list, the position information of the called operator to the group processor of the calling operator, for establishing a data connection via a data interface, and for sending the data record to the called operator.

Additional features and advantages of the present invention are described

30   in, and will be apparent from, the following Detailed Description of the Invention and the Figures.

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BRIEF DESCRIPTION OF THE FIGURES

Figure 1 shows the basic construction of a network with a switching center and an operator service.

DETAILED DESCRIPTION OF THE INVENTION

5   A number of subscribers OP 1 ... OP 5 of an operator service OPS can be seen in Figure 1, top left, the hierarchy within the subscribers OP1, OP2... not being discussed here. All the subscribers OP1, OP2... are linked into the network in addition to customary network subscribers TEI of a telecommunications network, an ISDN network in the present case, and are therefore linked into the

10   network via an S_0 interface; i.e., in this case connected to a respective network connection NTE.

A switching center VST 5 of the network is shown top right and it has, in a known manner, a switching network SNE and peripheral line groups LG 1, LG 2 connected thereto. A coordination processor COP is provided for the control of the

15   switching center VST, principally of the switching network SNE. Likewise in a known manner, each peripheral line group LG 1, LG 2 contains a group processor GRP and, in this exemplary embodiment, concentrators DLU (Digital Line Unit) are connected to each peripheral line group via a U_{k0} interface. Each of these concentrators DLU also has a number of inputs for the network connections already

20   mentioned above. In the case of relatively large switching centers, up to 512 peripheral line groups (Line Trunk Group) LTC may be connected to a switching network SNE, and there are usually two concentrators DLU connected to each line group.

Different programs, supported by the group processor GRP, run in a

25   peripheral line group LG 1, LG 2, e.g. the majority of the connection establishment, the signaling, the code reception, etc. are effected here. In general, 70% of the connection establishment is carried out in the peripheral line groups, whereas the co-ordination processor COP is ascribed primarily routing tasks.

Also associated with the switching center is an operation and maintenance

30   system OMS with an operation and maintenance terminal OMT, at which

monitoring personnel can continuously observe the state of the switching center and identify faults.

The subscribers OP 1 ... OP 5 of the operator service OPS usually have workstations with personal computers which contain ISDN cards and special software and also headsets for the operators. These subscribers OP 1, OP 2, ... can send messages to the switching center, primarily to the peripheral line groups LG 1, LG 2, the messages being processed in the group processor GRP and leading to corresponding further measures; e.g., a connection establishment. The messages are sent in a point-to-point configuration in the case of a permanently active layer 2 and in the D channel in an ISDN network.

The coordination processor COP of the switching center VST also contains a list LIS or table in which an item of position information is assigned to the identifications of the individual operators OP 1 ... OP 5. This position information contains, in particular, the indication of the concentrator DLU to which the operator is connected, and also the associated peripheral line group LG 1 or LG 2 and the port number of the operator.

In the following description of message communication or connection establishment, it shall be assumed that the operator OP 1 wishes to relay information in the form of, for example, screen data or, alternatively, call data to the operator OP 2 because, e.g., a consultation with operator OP 2 is necessary.

If the operator OP 1 wishes to send from his/her console, he/she can, for example, call up a specific menu box in which he/she enters the identification or an identification number of the desired operator, of each operator OP 2. Afterward, a request together with the identification and with a first data record, which is intended for the second, called operator OP 2, is sent via the D channel and firstly arrives at the group processor GRP of the associated line group LG 1, which then sends a message to the coordination processor COP of the switching center VST, which contains the request to disclose position information with regard to the called operator OP 2.

With the aid of the list LIS already mentioned, the coordination processor COP determines the position information assigned to the called subscriber OP 2,

such as peripheral line group and port number, and sends this information to the group processor GRP of the calling operator OP 1. The group processor then establishes a data connection via a data interface RIN (Report Interface), and the first data record is then sent via the data channel to the called operator OP 2.

5   Furthermore, the group processor GRP in the line group LG 2 of the called operator OP 2 establishes the connection up to the calling operator OP 1, so that there is then a continuous data connection between both operators OP 1 and OP 2. A data traffic proceeding via this connection subsequently can be ended at any time from any side; i.e., either from the operator OP 1 or from the operator OP 2. It goes without

10   saying that the present invention is advantageous if only because the establishment of a call channel between the operators is no longer necessary and resources of the network are not broached or can be used for other purposes.

Although the present invention has been described with reference to specific embodiments, those of skill in the art will recognize the changes may be

15   made thereto without departing from the spirit and scope of the invention as set forth in the hereafter appended claims.

ABSTRACT OF THE DISCLOSURE

A method for transmitting data between members of an operator service in a digital telecommunications network, in which a calling operator sends to its

20   switching center a request together with the identification of a called operator and at least a first data record, the group processor of the line group sends a request for disclosure of position information with regard to the called operator to the coordination processor, the latter determines the position information from a list and sends it to the group processor of the calling operator, this group processor

25   establishes a data connection via a data interface, the first data record is sent via a data channel to the called operator, and the connection is then established in the data channel up to the calling operator.

In the claims:

On page 8, cancel line 1, and substitute the following left-hand justified

30   heading therefor:

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CLAIMS

Please cancel 1-9, without prejudice, and substitute the following claims therefor:

10. A method for transmitting data between subscribers of a
5 telecommunications network, the subscribers being members of an operator service, and at least a call channel and a data channel being available for connections via a switching center , the method comprising the steps of:

sending, via a calling operator, to a respectively associated peripheral line group of the switching center a request together with an
10 identification of a called operator and at least a first data record via a data channel;

forwarding the identification to a group processor of the peripheral line group;

sending a message, via the group processor, to a coordination processor with a request for disclosure of position information with regard to the
15 called operator;

determining position information assigned to the called subscriber in a list of the coordination processor;

sending the position information to the group processor of the calling operator;

20 establishing a data connection via a data interface by the group processor of the calling operator;

sending the first data record via a data channel to the called operator; and

establishing a connection in the data channel up to the calling
25 operator via a group processor in the line group of the called operator.

11. A method for transmitting data between subscribers of a telecommunications network as claimed in claim 10, wherein the position information contains an indication of the concentrator, of the port and of the line
30 group.

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12. A method for transmitting data between subscribers of a telecommunications network as claimed in claim 10, wherein data traffic between peripheral line groups proceeds via report interfaces.

5   13. A method for transmitting data between subscribers of a telecommunications network as claimed in claim 10, wherein the data to be transmitted includes at least one of a part of screen information which can be output on a screen, and a part of a spoken enquiry.

10   14. A telecommunications network, comprising:
        an operator service having a plurality of subscribers who are members; and
        a switching center to which the plurality of subscribers are connected, the switching center having at least a coordination processor and
15   peripheral line groups with respective group processors, wherein a list is set up in the coordination processor which determines, in addition to an identification of operators in the operator service, position information of the operators, and the switching center is set up for receiving a request of a calling operator, which contains an identification of a called subscriber and at least a first data record, for
20   sending, based on the identification and using the list, the position information of the called operator to the group processor of the calling operator, for establishing a data connection via a data interface, and for sending a data record to the called operator.

25   15. A telecommunications network as claimed in claim 14, wherein the position information contains an indication of a concentrator, of the port and of the line group.

        16. A telecommunications network as claimed in claim 14, wherein
30   report interfaces are provided for data traffic between peripheral line groups .

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17.   A telecommunications network as claimed in claim 14, wherein data to be transmitted includes at least one of a part of screen information which can be output on a screen, and a part of a spoken enquiry.

5   18.   A telecommunications network as claimed in claim 14, wherein the network is and ISDN network, the data channel is a D channel and the call channels are B channels.
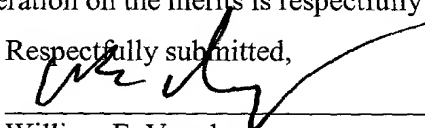
REMARKS

The present amendment makes editorial changes and corrects typographical

10   errors in the specification, which includes the Abstract, in order to conform the specification to the requirements of United States Patent Practice. No new matter is added thereby. Attached hereto is a marked-up version of the changes made to the specification by the present amendment. The attached page is captioned **"Version With Markings To Show Changes Made".**

15   In addition, the present amendment cancels original claims 1-9 in favor of new claims 10-18. Claims 10-18 have been presented solely because the revisions by red-lining and underlining which would have been necessary in claims 1-9 in order to present those claims in accordance with preferred United States Patent Practice would have been too extensive, and thus would have been too

20   burdensome. The present amendment is intended for clarification purposes only and not for substantial reasons related to patentability pursuant to 35 U.S.C. §§103, 102, 103 or 112. Indeed, the cancellation of claims 1-9 does not constitute an intent on the part of the Applicants to surrender any of the subject matter of claims 1-9.

25   Early consideration on the merits is respectfully requested.

Respectfully submitted,

_____ (Reg. No. 39,056)
William E. Vaughan
Bell, Boyd & Lloyd LLC
30   P.O. Box 1135
Chicago, Illinois 60690-1135
(312) 807-4292
Attorneys for Applicants

<u>**VERSIONS WITH MARKINGS TO SHOW CHANGES MADE**</u>

<u>In The Specification:</u>

The Specification of the present application, including the Abstract, has been amended as follows:

5
<div align="center">

<u>SPECIFICATION</u>

<u>TITLE OF THE INVENTION</u>

<u>METHOD FOR TRANSMITTING DATA BETWEEN</u>

<u>MEMBERS OF AN OPERATOR SERVICE</u>

<u>BACKGROUND OF THE INVENTION</u>

</div>

10 ~~Description~~

~~Method for transmitting data between members of an operator service~~

The <u>present</u> invention relates to a method for transmitting data between subscribers of a telecommunications network, who are members of an operator service, at least a call channel and a data channel being available for connections

15 via a switching center.

Equally, the <u>present</u> invention relates to a telecommunications network in which subscribers who are members of an operator service are connected to a switching center, and the switching center has at least a coordination processor and also peripheral line groups with a group processor.

20 So-called operator services are required in telephone networks and constitute an essential link between the customers of the network and the network operators. The tasks of such an operator service are manifold, a main task being to provide the subscribers with information on enquiry. By way of example, a subscriber may call an operator service in an ISDN network and request

25 information. The competent operator may then, if necessary, ~~e.g.~~ access a database, ~~said~~ <u>for example, the</u> operator then having an item of information with regard to another subscriber on the screen of his PC. After a connection desire expressed by the operator, which may be effected ~~e.g.,~~ <u>for example,</u> by pressing a key, the operator is connected to the subscriber sought. The operator is then connected both

30 to the originating subscriber and to the subscriber sought and can optionally speak to one of the subscribers. Once again in response to further pressing of a key,

<div align="center">11</div>

signaling is effected on the D channel, and the line positions of both subscribers of the peripheral line group are then disclosed, and the voice channels are connected via the switching network, so that ultimately there is a direct connection between the two subscribers. The example just described is intended to represent only one

5   of the possibilities or tasks of an operator service.

Large networks with many subscribers require correspondingly large operator service systems with many, usually hierarchically structured system subscribers (operators), such as, for example, in the applicant's system called ADMOSS. Messages from the operators to a switching center are effected, as

10   already mentioned, in the D channel in an ISDN network, to be precise in a point-to-point configuration in the case of a permanently active layer 2 of the OSI layer model. The messages are effected in a manner supported by the D-channel protocol in an ISDN network, in respect of which reference is also made to the Blue Book, Volume VI - Fascicle VI. 11, "Digital Subscribe Signalling System

15   No. 1 (DSS1), Network Layer, User-Network Management", Recommendations Q. 930 - Q. 940, in particular to Recommendation Q. 931.

The operators are usually stationed in so-called call centers and their respective equipment, which ~~comprises~~ includes terminal, PC, screen, etc., and usually and hereinafter is called "console", is directly connected to the system or

20   can be connected to the local switching center. During operation of the operator service, there is often a requirement to transmit data from one operator to another. By way of example, one operator who cannot handle an enquiry, for instance for linguistic reasons, should be able to be connected to another operator and communicate to him/her the respective screen content, or parts thereof, of his/her

25   console ("screen transfer"). In order to make this possible, according to the prior art a call connection-, in a B channel in the case of ISDN-, must be established, via which the data transfer is then carried out.

It is an object of the present invention to specify a method which enables a simple transmission of data between operators of an operator service without a

30   dedicated call channel having to be established.

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SUMMARY OF THE INVENTION

Such ~~This~~ object is achieved ~~by means of~~ via a method of the type
mentioned in the introduction in which, according to the present invention, a first,
calling operator sends to its peripheral line group of the switching center a request
5   together with the identification of a second, called operator and at least a first data
record via a data channel, the identification is forwarded to the group processor of
the line group and ~~said~~ the group processor sends a message to the coordination
processor with the request for disclosure of position information with regard to the
called operator, in a list of the coordination processor, position information
10   assigned to the called subscriber is determined and sent to the group processor of
the calling operator, the group processor of the calling operator establishes a data
connection via a data interface, and the first data record is sent via a data channel to
the called operator, and the group processor in the line group of the called operator
establishes the connection in the data channel up to the calling operator.

15   The present invention makes it possible, with a low outlay and extremely
quickly, to exchange data as required between the operators of an operator service,
which leads to increased efficiency of the service system and ultimately increases
the user friendliness. At the same time, however, no call channel is blocked~~;~~, i.e., a
call channel remains free for calls conducted alongside.

20   It is expedient if the position information contains the indication of the
concentrator, of the port and of the line group.

          Furthermore, it may be advantageous if the data traffic between peripheral
line groups proceeds via report interfaces. The concept "report interface" is known
to the person skilled in the art and is described, for example, in EWSD: line groups
25   LTG subsystem description A 30308-X2720-X-4-18, published by the Public
Switching Systems Division, Siemens AG, 1985. It enables very fast data traffic
that can be established in a simple manner.

          The operators' work is facilitated if the data to be transmitted contain at
least parts of a screen content and/or of a spoken enquiry.

The method of the present invention is particularly expedient if the communications network (NET) is an ISDN network, the data channel is the D channel and the call channels are B channels.

The object set is also enabled by a telecommunications network of the type mentioned above in which, according to the present invention, a list is set up in the coordination processor, which list determines, in addition to the identification of the operators, the position information thereof, such as line group, port number and concentrator, and the switching center is set up for receiving a request of a calling operator, which contains an identification of a called subscriber and at least a first data record, for sending, on the basis of the identification, using the list, the position information of the called operator to the group processor of the calling operator, for establishing a data connection via a data interface, and for sending the data record to the called operator.

The advantages that can be achieved therewith and also those in connection with the features of the dependent claims 8 to 12 correspond to those mentioned in conjunction with the method and the invention.

The invention together with further advantages is explained in more detail below using an exemplary embodiment with reference to the drawing, which shows, in its single figure, the basic construction of a network with a switching center and an operator service.

Additional features and advantages of the present invention are described in, and will be apparent from, the following Detailed Description of the Invention and the Figures.

BRIEF DESCRIPTION OF THE FIGURES

Figure 1 shows the basic construction of a network with a switching center and an operator service.

DETAILED DESCRIPTION OF THE INVENTION

A number of subscribers OP 1 ... OP 5 of an operator service OPS can be seen in the figure Figure 1, top left, the hierarchy within the subscribers OP1, OP2... not being discussed here. All the subscribers OP1, OP2... are linked into the network in addition to customary network subscribers TEI of a

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telecommunications network, an ISDN network in the present case, and are therefore linked into the network via an S_0 interface, i.e., in this case connected to a respective network connection NTE.

A switching center VST 5 of the network is shown top right and it has, in a known manner, a switching network SNE and peripheral line groups LG 1, LG 2 connected thereto. A coordination processor COP is provided for the control of the switching center VST, principally of the switching network SNE. Likewise in a known manner, each peripheral line group LG 1, LG 2 contains a group processor GRP, and, in this exemplary embodiment, concentrators DLU (Digital Line Unit) are connected to each peripheral line group via a U_{k0} interface. Each of these concentrators DLU also has a ~~plurality~~ number of inputs for the network connections already mentioned above. In the case of relatively large switching centers, up to 512 peripheral line groups (Line Trunk Group) LTC may be connected to a switching network SNE, and there are usually two concentrators DLU connected to each line group.

Different programs, supported by the group processor GRP, run in a peripheral line group LG 1, LG 2, e.g. the majority of the connection establishment, the signaling, the code reception, etc. are effected here. In general, 70% of the connection establishment is carried out in the peripheral line groups, whereas the co-ordination processor COP is ascribed primarily routing tasks.

Also associated with the switching center is an operation and maintenance system OMS with an operation and maintenance terminal OMT, at which monitoring personnel can continuously observe the state of the switching center and identify faults.

The subscribers OP 1 ... OP 5 of the operator service OPS usually have workstations with personal computers which contain ISDN cards and special software and also headsets for the operators. These subscribers OP 1, OP 2, ... can send messages to the switching center, primarily to the peripheral line groups LG 1, LG 2, ~~said~~ the messages being processed in the group processor GRP and leading to corresponding further measures, e.g., a connection establishment. The messages

15

are sent in a point-to-point configuration in the case of a permanently active layer 2 and in the D channel in an ISDN network.

The coordination processor COP of the switching center VST also contains a list LIS or table in which an item of position information is assigned to the

5   identifications of the individual operators OP 1 ... OP 5. This position information contains, in particular, the indication of the concentrator DLU to which the operator is connected, and also the associated peripheral line group LG 1 or LG 2 and the port number of the operator.

In the following description of message communication or connection

10   establishment, it shall be assumed that the operator OP 1 wishes to relay information in the form of, for example, screen data or, alternatively, call data to the operator OP 2 because, e.g., a consultation with operator OP 2 is necessary.

If the operator OP 1 wishes to send from his/her console, he/she can, for example, call up a specific menu box in which he/she enters the identification or an

15   identification number of the desired operator, of each operator OP 2. Afterward, a request together with the identification and with a first data record, which is intended for the second, called operator OP 2, is sent via the D channel and firstly arrives at the group processor GRP of the associated line group LG 1, which then sends a message to the coordination processor COP of the switching center VST,

20   which contains the request to disclose position information with regard to the called operator OP 2.

With the aid of the list LIS already mentioned, the coordination processor COP determines the position information assigned to the called subscriber OP 2, such as peripheral line group and port number, and sends this information to the

25   group processor GRP of the calling operator OP 1. The group processor then establishes a data connection via a data interface RIN (Report Interface), and the first data record is then sent via the data channel to the called operator OP 2. Furthermore, the group processor GRP in the line group LG 2 of the called operator OP 2 establishes the connection up to the calling operator OP 1, so that there is then

30   a continuous data connection between both operators OP 1 and OP 2. A data traffic proceeding via this connection ~~can~~ subsequently can be ended at any time from any

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side-; i.e., either from the operator OP 1 or from the operator OP 2. It goes without saying that the present invention is advantageous if only because the establishment of a call channel between the operators is no longer necessary and resources of the network are not broached or can be used for other purposes.

5   Although the present invention has been described with reference to specific embodiments, those of skill in the art will recognize the changes may be made thereto without departing from the spirit and scope of the invention as set forth in the hereafter appended claims.

ABSTRACT OF THE DISCLOSURE

~~Abstract~~

~~Method for transmitting data between members of an operator service~~

A method for transmitting data between members ~~(OP 1, ..., OP 5)~~ of an

5   operator service ~~(OPS)~~ in a digital telecommunications network~~(NET)~~, in which a

calling operator ~~(OP 1)~~ sends to its switching center ~~(VST)~~ a request together with

the identification of a called operator and at least a first data record, the group

processor ~~(GRP)~~ of the line group ~~(LG 1)~~ sends a request for disclosure of position

information with regard to the called operator ~~(OP 2)~~ to the coordination

10   processor~~(COP)~~, the latter determines the position information from a list ~~(LIS)~~ and

sends it to the group processor ~~(GRP)~~ of the calling operator~~(OP 1)~~, this group

processor establishes a data connection via a data interface~~(RIN)~~, the first data

record is sent via a data channel to the called operator~~(OP 2)~~, and the connection is

then established in the data channel up to the calling operator.

15   ~~Fig.~~

Description

Method for transmitting data between members of an
operator service

5

The invention relates to a method for transmitting data
between subscribers of a telecommunications network,
who are members of an operator service, at least a call
channel and a data channel being available for
10 connections via a switching center.

Equally, the invention relates to a telecommunications
network in which subscribers who are members of an
operator service are connected to a switching center,
15 and the switching center has at least a coordination
processor and also peripheral line groups with a group
processor.

So-called operator services are required in telephone
20 networks and constitute an essential link between the
customers of the network and the network operators. The
tasks of such an operator service are manifold, a main
task being to provide the subscribers with information
on enquiry. By way of example, a subscriber may call an
25 operator service in an ISDN network and request
information. The competent operator may then, if
necessary, e.g. access a database, said operator then
having an item of information with regard to another
subscriber on the screen of his PC. After a connection
30 desire expressed by the operator, which may be effected
e.g. by pressing a key, the operator is connected to
the subscriber sought. The operator is then connected
both to the originating subscriber and to the
subscriber sought and can optionally speak to one of
35 the subscribers. Once again in response to further
pressing of a key, signaling is effected on the D
channel, and the line positions of both subscribers of

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the peripheral line group are then disclosed, and the
voice channels are connected

via the switching network, so that ultimately there is a direct connection between the two subscribers. The example just described is intended to represent only one of the possibilities or tasks of an operator
5   service.

Large networks with many subscribers require correspondingly large operator service systems with many, usually hierarchically structured system
10   subscribers (operators), such as, for example, in the applicant's system called ADMOSS. Messages from the operators to a switching center are effected, as already mentioned, in the D channel in an ISDN network, to be precise in a point-to-point configuration in the
15   case of a permanently active layer 2 of the OSI layer model. The messages are effected in a manner supported by the D-channel protocol in an ISDN network, in respect of which reference is also made to the Blue Book, Volume VI - Fascicle VI. 11, "Digital Subscribe
20   Signalling System No. 1 (DSS1), Network Layer, User-Network Management", Recommendations Q. 930 - Q. 940, in particular to Recommendation Q. 931.

The operators are usually stationed in so-called call
25   centers and their respective equipment, which comprises terminal, PC, screen, etc. and usually and hereinafter is called "console", is directly connected to the system or can be connected to the local switching center. During operation of the operator service, there
30   is often a requirement to transmit data from one operator to another. By way of example, one operator who cannot handle an enquiry, for instance for linguistic reasons, should be able to be connected to another operator and communicate to him the respective
35   screen content, or parts thereof, of his console ("screen transfer"). In order to make this possible, according to the prior art a call connection - in a B channel in the case of ISDN - must be established, via which the data transfer is then carried out.

It is an object of the invention to specify a method
which enables a simple transmission of data

between operators of an operator service without a dedicated call channel having to be established.

This object is achieved by means of a method of the type mentioned in the introduction in which, according to the invention, a first, calling operator sends to its peripheral line group of the switching center a request together with the identification of a second, called operator and at least a first data record via a data channel, the identification is forwarded to the group processor of the line group and said group processor sends a message to the coordination processor with the request for disclosure of position information with regard to the called operator, in a list of the coordination processor, position information assigned to the called subscriber is determined and sent to the group processor of the calling operator, the group processor of the calling operator establishes a data connection via a data interface, and the first data record is sent via a data channel to the called operator, and the group processor in the line group of the called operator establishes the connection in the data channel up to the calling operator.

The invention makes it possible, with a low outlay and extremely quickly, to exchange data as required between the operators of an operator service, which leads to increased efficiency of the service system and ultimately increases the user friendliness. At the same time, however, no call channel is blocked, i.e. a call channel remains free for calls conducted alongside.

It is expedient if the position information contains the indication of the concentrator, of the port and of the line group.

Furthermore, it may be advantageous if the data traffic between peripheral line groups proceeds via report

interfaces. The concept "report interface" is known to
the person skilled in the art

and is described for example in EWSD: line groups LTG
subsystem description A 30308-X2720-X-4-18, published
by the Public Switching Systems Division, Siemens AG,
1985. It enables very fast data traffic that can be
5   established in a simple manner.

The operators' work is facilitated if the data to be
transmitted contain at least parts of a screen content
and/or of a spoken enquiry.
10

The method is particularly expedient if the
communications network (NET) is an ISDN network, the
data channel is the D channel and the call channels are
B channels.
15

The object set is also enabled by a telecommunications
network of the type mentioned above in which, according
to the invention, a list is set up in the coordination
processor, which list determines, in addition to the
20   identification of the operators, the position
information thereof, such as line group, port number
and concentrator, and the switching center is set up
for receiving a request of a calling operator, which
contains an identification of a called subscriber and
25   at least a first data record, for sending, on the basis
of the identification, using the list, the position
information of the called operator to the group
processor of the calling operator, for establishing a
data connection via a data interface, and for sending
30   the data record to the called operator.

The advantages that can be achieved therewith and also
those in connection with the features of the dependent
claims 8 to 12 correspond to those mentioned in
35   conjunction with the method and the invention.

The invention together with further advantages is
explained in more detail below using an exemplary
embodiment with reference to the drawing, which shows,
in its single

figure, the basic construction of a network with a switching center and an operator service.

5   A number of subscribers OP 1 … OP 5 of an operator service OPS can be seen in the figure, top left, the hierarchy within the subscribers OP1, OP2… not being discussed here. All the subscribers OP1, OP2… are linked into the network in addition to customary network subscribers TEI of a telecommunications

10   network, an ISDN network in the present case, and are therefore linked into the network via an S_0 interface, i.e. in this case connected to a respective network connection NTE.

15   A switching center VST 5 of the network is shown top right and it has, in a known manner, a switching network SNE and peripheral line groups LG 1, LG 2 connected thereto. A coordination processor COP is provided for the control of the switching center VST,

20   principally of the switching network SNE. Likewise in a known manner, each peripheral line group LG 1, LG 2 contains a group processor GRP, and, in this exemplary embodiment, concentrators DLU (Digital Line Unit) are connected to each peripheral line group via a U_{k0}

25   interface. Each of these concentrators DLU also has a plurality of inputs for the network connections already mentioned above. In the case of relatively large switching centers, up to 512 peripheral line groups (Line Trunk Group) LTC may be connected to a switching

30   network SNE, and there are usually two concentrators DLU connected to each line group.

Different programs, supported by the group processor GRP, run in a peripheral line group LG 1, LG 2, e.g.

35   the majority of the connection establishment, the signaling, the code reception, etc. are effected here.

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In general, 70% of the connection establishment is carried out in the peripheral line groups, whereas the co-ordination processor COP is ascribed primarily routing tasks.

Also associated with the switching center is an
operation and maintenance system OMS with an operation
and maintenance terminal OMT, at which monitoring
personnel can continuously observe the state of the
5   switching center and identify faults.

The subscribers OP 1 … OP 5 of the operator service OPS
usually have workstations with personal computers which
contain ISDN cards and special software and also
10 headsets for the operators. These subscribers OP 1,
OP 2, … can send messages to the switching center,
primarily to the peripheral line groups LG 1, LG 2,
said messages being processed in the group processor
GRP and leading to corresponding further measures, e.g.
15 a connection establishment. The messages are sent in a
point-to-point configuration in the case of a
permanently active layer 2 and in the D channel in an
ISDN network.

20 The coordination processor COP of the switching center
VST also contains a list LIS or table in which an item
of position information is assigned to the
identifications of the individual operators OP 1 …
OP 5. This position information contains, in
25 particular, the indication of the concentrator DLU to
which the operator is connected, and also the
associated peripheral line group LG 1 or LG 2 and the
port number of the operator.

30 In the following description of message communication
or connection establishment, it shall be assumed that
the operator OP 1 wishes to relay information in the
form of, for example, screen data or, alternatively,
call data to the operator OP 2 because e.g. a
35 consultation with operator OP 2 is necessary.

If the operator OP 1 wishes to send from his console,
he can, for example, call up a specific menu box in

which he enters the identification or an identification number of the desired operator, of each operator OP 2. Afterward, a request together with the identification and with a first data record, which is intended for the

5   second, called operator OP 2, is sent via the D channel and firstly arrives at the group processor GRP of the associated line group LG 1, which then sends a message to the coordination processor COP of the switching center VST, which contains the request to disclose

10   position information with regard to the called operator OP 2.

With the aid of the list LIS already mentioned, the coordination processor COP determines the position

15   information assigned to the called subscriber OP 2, such as peripheral line group and port number, and sends this information to the group processor GRP of the calling operator OP 1. The group processor then establishes a data connection via a data interface RIN

20   (Report Interface), and the first data record is then sent via the data channel to the called operator OP 2. Furthermore, the group processor GRP in the line group LG 2 of the called operator OP 2 establishes the connection up to the calling operator OP 1, so that

25   there is then a continuous data connection between both operators OP 1 and OP 2. A data traffic proceeding via this connection can subsequently be ended at any time from any side, i.e. either from the operator OP 1 or from the operator OP 2. It goes without saying that the

30   invention is advantageous if only because the establishment of a call channel between the operators is no longer necessary and resources of the network are not broached or can be used for other purposes.

35

Patent Claims

1.   A method for transmitting data between subscribers
(OP1… OP5) of a telecommunications network (NET), who
5   are members of an operator service (OPS), at least a
call channel and a data channel being available for
connections via a switching center (VST),
characterized
in that a first, calling operator (OP1) sends to its
10   peripheral line group (LG1) of the switching center
(VST) a request together with the identification of a
second, called operator (OP2) and at least a first data
record via a data channel,
the identification is forwarded to the group processor
15   (GRP) of the line group (LG1) and said group processor
sends a message to the coordination processor (COP)
with the request for disclosure of position information
with regard to the called operator (OP2),
in a list (LIS) of the coordination processor (COP),
20   position information assigned to the called subscriber
is determined and sent to the group processor (GRP) of
the calling operator (OP1),
the group processor of the calling operator (OP1)
establishes a data connection via a data interface
25   (RIN), and
the first data record is sent via a data channel to the
called operator (OP2), and
the group processor (GRP) in the line group (LG2) of
the called operator (OP2) establishes the connection in
30   the data channel up to the calling operator.

2.   The method as claimed in claim 1,
characterized in that the position information contains
the indication of the concentrator (DLU), of the port
35   and of the line group (LG2).
3.   The method as claimed in claim 1 or 2,

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characterized in that the data traffic between peripheral line groups (LG1, LG2) proceeds via report interfaces.

5   4.   The method as claimed in one of claims 1 to 3, characterized in that the data to be transmitted comprise at least a part of screen information which can be output on a screen, and/or contain at least a part of a spoken enquiry.

10

5.   A telecommunications network in which subscribers (OP1, OP2) who are members of an operator service (OPS) are connected to a switching center (VST), and the switching center has at least a coordination processor
15 (COP) and also peripheral line groups (LG1, LG2) with a group processor (GRP), characterized in that a list (LIS) is set up in the coordination processor (COP), which list determines, in addition to
20 the identification of the operators (OP1… OP5), the position information thereof, such as line group, port number and concentrator, and the switching center (VST) is set up for receiving a request of a calling operator (OP1), which contains an identification of a called
25 subscriber (OP2) and at least a first data record, for sending, on the basis of the identification, using the list (LIS), the position information of the called operator (OP2) to the group processor (GRP) of the calling operator (OP1), for establishing a data
30 connection via a data interface (RIN), and for sending the data record to the called operator (OP2).

6.   The telecommunications network as claimed in claim
5,
characterized in that the position information contains
the indication of the concentrator (DLU), of the port
5   and of the line group (LG2).

7.   The telecommunications network as claimed in claim
5 or 6,
characterized in that report interfaces are provided
10 for the data traffic between peripheral line groups
(LG1, LG2).

8.   The telecommunications network as claimed in one
of claims 5 to 7,
15 characterized in that the data to be transmitted
comprise at least a part of screen information which
can be output on a screen, and/or contain at least a
part of a spoken enquiry.

20 9.   The telecommunications network as claimed in one
of claims 5 to 8,
characterized in that it is an ISDN network, the data
channel is the D channel and the call channels are B
channels.

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Declaration Power of Attorney For Patent Application
Erklärung Für Patentanmeldungen Mit Vollmacht
German Language Declaration

Als nachstehend benannter Erfinder erkläre ich hiermit an Eides Statt:

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Verfahren zum Uebertragen von Daten zwischen Mitgliedern eines Operatorservice

deren Beschreibung

(zutreffendes ankreuzen)
☐ hier beigefügt ist.
☒ am __31.03.2000__ als
PCT internationale Anmeldung
PCT Anmeldungsnummer _____ PCT/DE00/00980
eingereicht wurde und am _____
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Ich bestätige hiermit, dass ich den Inhalt der obigen Patentanmeldung einschliesslich der Ansprüche durchgesehen und verstanden habe, die eventuell durch einen Zusatzantrag wie oben erwähnt abgeändert wurde.

Ich erkenne meine Pflicht zur Offenbarung irgendwelcher Informationen, die für die Prüfung der vorliegenden Anmeldung in Einklang mit Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) von Wichtigkeit sind, an.

Ich beanspruche hiermit ausländische Prioritätsvorteile gemäss Abschnitt 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 119 aller unten angegebenen Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde, und habe auch alle Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde nachstehend gekennzeichnet, die ein Anmeldedatum haben, das vor dem Anmeldedatum der Anmeldung liegt, für die Priorität beansprucht wird.

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

Method for transmitting data between members of an operator service

the specification of which

(check one)
☐ is attached hereto.
☒ was filed on __31.03.2000__ as
PCT international application
PCT Application No. ____ PCT/DE00/00980
and was amended on _____
(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Form PTO-FB-240 (8-83)   Patent and Trademark Office-U.S. DEPARTMENT OF COMMERCE

IDNR: 2590 / V: 99-1.00 / B:Val

Prior foreign appplications
Priorität beansprucht

<u>Priority Claimed</u>

<u>19914794.9</u>   <u>DE</u>   <u>31.03.1999</u>   ☒   ☐
(Number)   (Country)   (Day Month Year Filed)   Yes   No
(Nummer)   (Land)   (Tag Monat Jahr eingereicht)   Ja   Nein

                                                                        ☐   ☐
(Number)   (Country)   (Day Month Year Filed)   Yes   No
(Nummer)   (Land)   (Tag Monat Jahr eingereicht)   Ja   Nein

                                                                        ☐   ☐
(Number)   (Country)   (Day Month Year Filed)   Yes   No
(Nummer)   (Land)   (Tag Monat Jahr eingereicht)   Ja   Nein

Ich beanspruche hiermit gemäss Absatz 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 120, den Vorzug aller unten aufgeführten Anmeldungen und falls der Gegenstand aus jedem Anspruch dieser Anmeldung nicht in einer früheren amerikanischen Patentanmeldung laut dem ersten Paragraphen des Absatzes 35 der Zivilprozeßordnung der Vereinigten Staaten, Paragraph 122 offenbart ist, erkenne ich gemäss Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) meine Pflicht zur Offenbarung von Informationen an, die zwischen dem Anmeldedatum der früheren Anmeldung und dem nationalen oder PCT internationalen Anmeldedatum dieser Anmeldung bekannt geworden sind.	I hereby claim the benefit under Title 35. United States Code. §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §122, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occured between the filing date of the prior application and the national or PCT international filing date of this application.

<u>PCT/DE00/00980</u>   <u>31.03.2000</u>   <u>anhängig</u>   <u>pending</u>
(Application Serial No.)   (Filing Date D, M, Y)   (Status)   (Status)
(Anmeldeseriennummer)   (Anmeldedatum T, M, J)   (patentiert, anhängig, (patented, pending,
                                                    aufgegeben)   abandoned)

(Application Serial No.)   (Filing Date D,M,Y)   (Status)   (Status)
(Anmeldeseriennummer)   (Anmeldedatum T, M; J)   (patentiert, anhängig, (patented, pending,
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Ich erkläre hiermit, dass alle von mir in der vorliegenden Erklärung gemachten Angaben nach meinem besten Wissen und Gewissen der vollen Wahrheit entsprechen, und dass ich diese eidesstattliche Erklärung in Kenntnis dessen abgebe, dass wissentlich und vorsätzlich falsche Angaben gemäss Paragraph 1001, Absatz 18 der Zivilprozessordnung der Vereinigten Staaten von Amerika mit Geldstrafe belegt und/oder Gefängnis bestraft werden koennen, und dass derartig wissentlich und vorsätzlich falsche Angaben die Gültigkeit der vorliegenden Patentanmeldung oder eines darauf erteilten Patentes gefährden können.	I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

German Language Declaration

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Voller Name des zweiten Miterfinders (falls zutreffend):	Full name of second joint inventor, if any:
Unterschrift des Erfinders Datum	Second Inventor's signature Date
Wohnsitz	Residence
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